


<b>Prüfbericht-Nr.:</b> Test Report No.:	<b>50357922 001</b>	<b>Auftrags-Nr.:</b> Order No.:	<b>170250187</b>	<b>Seite 1 von 12</b> Page 1 of 12
<b>Kunden-Referenz-Nr.:</b> Client Reference No.:	N/A	<b>Auftragsdatum:</b> Order date:	2020-08-26	
<b>Auftraggeber:</b> Client:	<b>AOK Industrial Company Limited</b> 1# Building, Sans Souci Technology Industrial Park, Shajin street, Shenzhen city, Guangdong Provice, China			
<b>Prüfgegenstand:</b> Test item:	AOK-WIL Street Light			
<b>Bezeichnung / Typ-Nr.:</b> Identification / Type No.:	AOK-55WIL Class II			
<b>Auftrags-Inhalt:</b> Order content:	Type examination			
<b>Prüfgrundlage:</b> Test specification:	IES LM-79-08 & client's special requirements			
<b>Wareneingangsdatum:</b> Date of receipt:	2020-08-26	<p>Detaillierte Fotodokumentation siehe Anlage zu diesem Bericht</p> <p>Detailed photo documentation see appendix to this report</p>		
<b>Prüfmuster-Nr.:</b> Test sample No.:	002#			
<b>Prüfzeitraum:</b> Testing period:	2020-08-26 to 2020-08-27			
<b>Ort der Prüfung:</b> Place of testing:	See page 2			
<b>Prüflaboratorium:</b> Testing laboratory:	TUV Rheinland (Guangdong) Ltd.			
<b>Prüfergebnis*:</b> Test result*:	See following pages			
<b>geprüft von / tested by:</b>		<b>kontrolliert von / reviewed by:</b>		
2020-08-27 Dere Zhang / Project Engineer 		2020-08-27 Mars Yan / Reviewer		
<b>Datum</b> Date	<b>Name / Stellung</b> Name / Position	<b>Unterschrift</b> Signature	<b>Datum</b> Date	<b>Name / Stellung</b> Name / Position
<b>Sonstiges / Others:</b>				
N/A				
<b>Zustand des Prüfgegenstandes bei Anlieferung:</b> Condition of the test item at delivery:		<b>Prüfmuster vollständig und unbeschädigt</b> Test item complete and undamaged		
<p>* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft  P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet</p> <p>Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor  P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested</p>				
<p><b>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</b>  This test report only relates to the a. M. Test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</p>				

**Copy of marking plate:**

N/A

**Test item**

Description..... : AOK-WIL Street Light

Trademark ..... : N/A

Model and/or type reference ..... : AOK-55WIL Class II

Manufacturer..... : Same as client

Factory..... : Same as client

Rating(s)..... : 220-240Vac, 50/60Hz, 55W, 4000K

**Test case verdicts**

Test case does not apply to the test object..... N/A

Test item does meet the requirement ..... P(ass)

Test item does not meet the requirement ..... F(ail)

**Testing**

Date of receipt of test item ..... See cover page

Date(s) of performance of test..... See cover page

**General remarks:**

This report shall not be reproduced except in full without the written approval of the testing laboratory.

The test results presented in this report relate only to the item(s) tested.

“(see remark #)” refers to a remark appended to the report.

“(see Annex #)” refers to an annex appended to the report.

Throughout this report a point is used as the decimal separator.

List of test equipment must be kept on file and available for review.

**Summary of testing:**

1. As per client's special requirement, test was conducted under 230Vac, 50Hz, other tests or conditions were not considered in this report.

**LED specification:**

Model	Manufacturer	Size (mm)	V <sub>F</sub> (V)	I <sub>F</sub> (mA)	CCT (K)	View angle (°)
LUXEON 3030 2D Line	LUMILEDS	3.00x3.00x0.52	5.8-6.6	120	4000	116

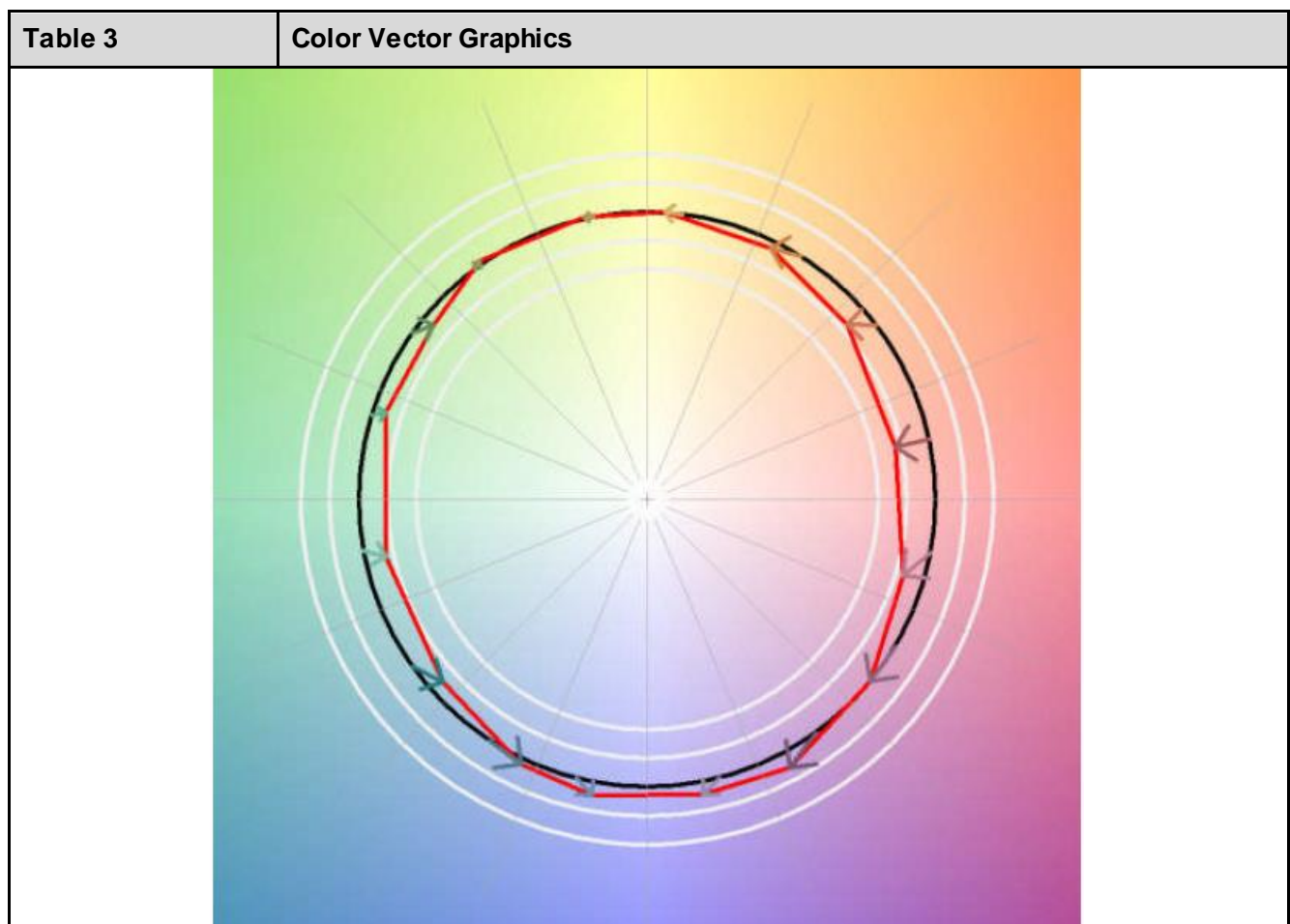
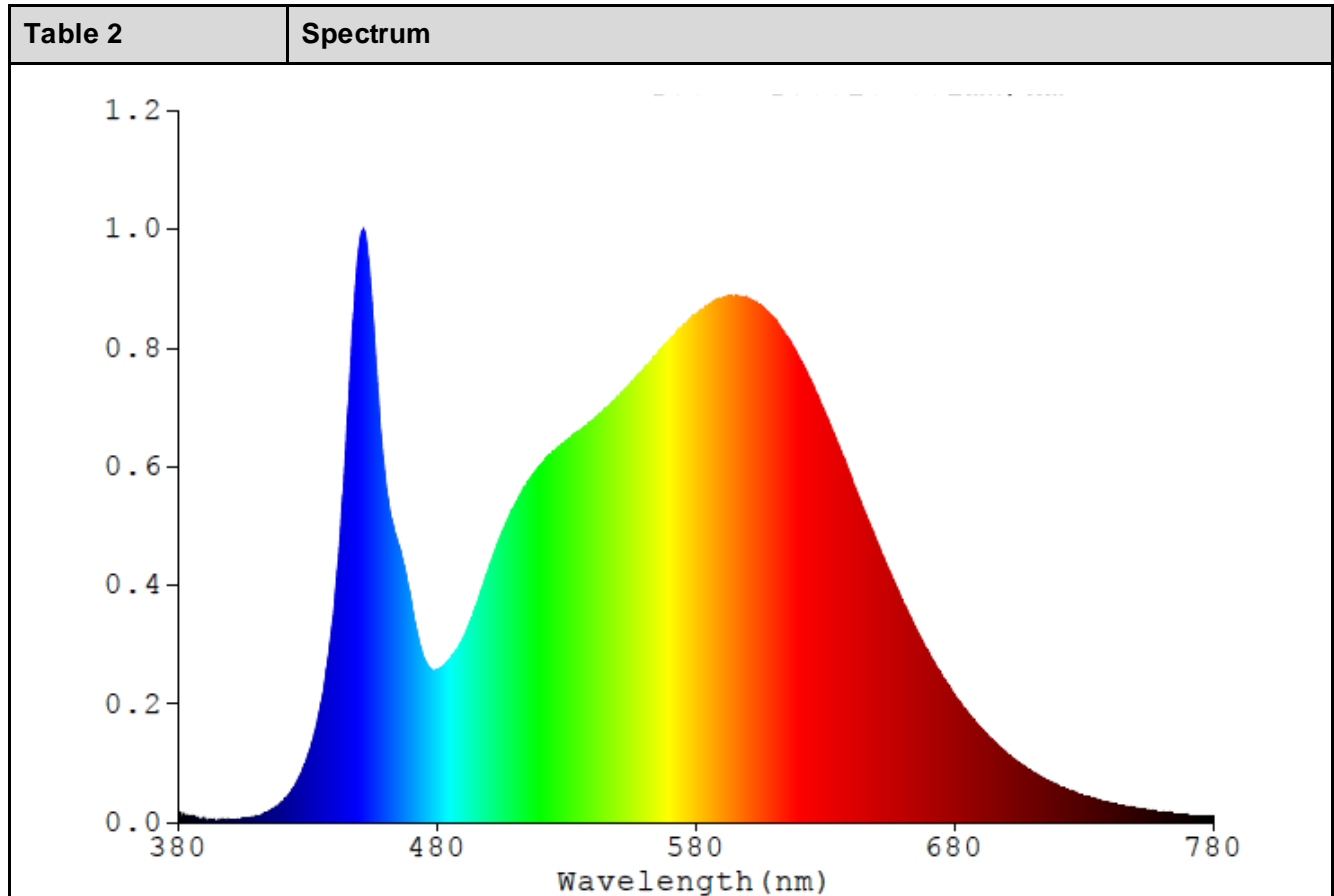
**Test location:**

Standard-Tech Testing Services Co., Ltd.

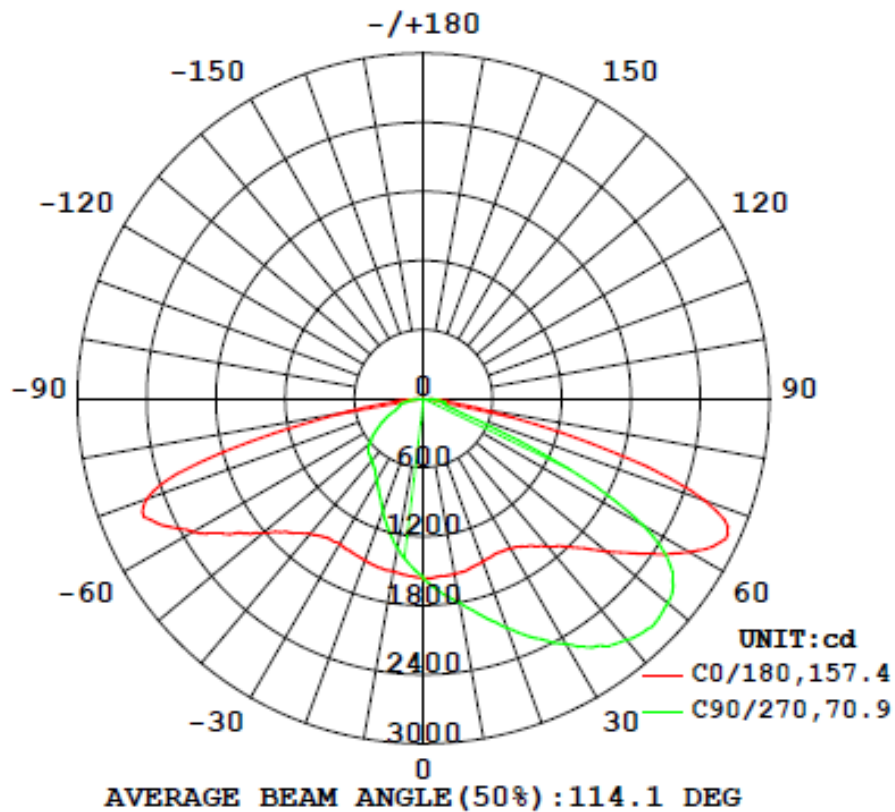
No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

2.0	Ambient Conditions		P
2.1	General		P
2.2	Air Temperature	25°C±1°C	P
2.3	Thermal Condition for Mounting SSL Products		P
2.4	Air Movement		P
3.0	Power Supply Characteristics		P
3.1	Waveshape of AC power supply	<3%	P
3.2	Voltage regulation	Within ±0.2% under load	P
4.0	Seasoning of SSL Product		N/A
	No seasoning of SSL product	Tested with no seasoning	N/A
5.0	Stabilization of SSL Product		P
	SSL product has sufficiently stabilized before measurement	150 minutes	P
6.0	Operation Orientation		P
	SSL product shall be stabilized and measured in intended operating orientation	As normal use	P
7.0	Electrical Settings		P
	SSL product shall be operated at rated voltage	230Vac, 50Hz	P
	SSL product with dimming capability are tested at maximum input power condition		N/A
	SSL product with different modes are measured in all relevant modes		N/A
8.0	Electrical Instrumentations		P
8.1	Circuits		P
8.2	Uncertainties		P
9.0	Test methods for Total Luminous Flux measurement		P
9.1	Integrating sphere with a spectroradiometer (Sphere-spectroradiometer system)		P
9.2	Integrating sphere with a photometer head (Sphere-photometer system)		N/A
9.3	Goniophotometer		P
10.0	Luminous Intensity Distribution		P
11.0	Luminous Efficacy		P
	Calculation	See table 1	P
12.0	Test Methods for Color Characteristics of SSL Products		N/A
	Measurements	See table 1	N/A

Table 1		Test Data	
Test item	Measured Value		
	Integrating Sphere	Goniophotometer	
<b>Photometric Results</b>			
Total Luminous Flux (lm)	--	7851	
Luminous Efficacy (lm/W)	--	141.43	
Correlated Color Temperature (CCT, K)	3951	--	
Color Rendering Index (R <sub>a</sub> )	83.6	--	
R <sub>9</sub>	12	--	
R <sub>g</sub>	95	--	
R <sub>f</sub>	85	--	
R <sub>cs,h1</sub> (%)	-12	--	
SCDM (F4000)	1.9	--	
DUV	0.0020	--	
Chromaticity (Chroma x / Chroma y)	0.3841 / 0.3834	--	
Imax (cd)	--	3396	
Average Beam Angle (50%)	--	--	
Zonal Flux (0-60°)	--	67.8%	
Zonal Flux (60-90°)	--	32.2%	
Zonal Flux (80-90°)		1.2%	
Zonal Flux (90-180°)	--	0%	
Spacing Criteria (C/y)	--	22.5° / 1°	
Roadway Class	--	Type III, Short	
Goniophotometer Type	--	Type C	
<b>Electrical Results</b>			
Input Voltage (V)	--	230	
Input Frequency (Hz)	--	50	
Input Current (A)	--	0.2471	
Input Power (W)	--	55.51	
Power Factor	--	0.9763	
THDi (%)	--	9.04	
<b>Additional Information</b>			
Stabilization Time (Light output and electrical power, Minutes)	More than 150min	More than 150min	
Sphere Geometry Configuration	4π	--	
Ambient Temperature (°C) / R.H. (%):	24.6 / 65.0	25.0 / 43.2	
<b>Note:</b>			
- The sample is placed inside the integrating sphere or goniophotometer and power by a regulated supply. Stability is achieved when the variation of 3 readings of light output and electrical power over a period of 30 minutes, taken 15 minutes apart, is less than 0.5%.			



**Table 4** **Luminous Distribution Diagram**



**Table 5** **Zonal Flux Diagram**

°	C0	C45	C90	C135	C180	C225	C270	C315	°	□ zone	□ total	%lum, lamp
10	1548	1731	1799	1718	1530	1383	1321	1402	0- 10	148.8	148.8	1.9, 1.9
20	1505	1901	2125	1896	1496	1200	1040	1212	10- 20	439.7	588.4	7.5, 7.5
30	1508	2146	2462	2133	1461	977.5	815.5	990.0	20- 30	718.0	1306	16.6, 16.6
40	1671	2536	2736	2444	1536	804.0	703.8	830.6	30- 40	1009	2316	29.5, 29.5
50	2067	2996	2768	2799	1814	696.9	609.6	728.6	40- 50	1344	3660	46.6, 46.6
60	2662	3303	2196	3043	2310	529.2	422.2	552.2	50- 60	1666	5327	67.8, 67.8
70	2594	2644	288.4	2435	2554	277.2	242.0	295.7	60- 70	1645	6971	88.8, 88.8
80	458.8	153.2	168.5	175.3	669.9	113.6	127.2	116.8	70- 80	786.7	7758	98.8, 98.8
90	0	0	0	0	0	0	0	0	80- 90	92.65	7851	100, 100
100	0	0	0	0	0	0	0	0	90-100	0	7851	100, 100
110	0	0	0	0	0	0	0	0	100-110	0	7851	100, 100
120	0	0	0	0	0	0	0	0	110-120	0	7851	100, 100
130	0	0	0	0	0	0	0	0	120-130	0	7851	100, 100
140	0	0	0	0	0	0	0	0	130-140	0	7851	100, 100
150	0	0	0	0	0	0	0	0	140-150	0	7851	100, 100
160	0	0	0	0	0	0	0	0	150-160	0	7851	100, 100
170	0	0	0	0	0	0	0	0	160-170	0	7851	100, 100
180	0	0	0	0	0	0	0	0	170-180	0	7851	100, 100
DEG	LUMINOUS INTENSITY: cd									UNIT: lm		

Table 6	LCS Table		
<b>LCS TABLE</b>			
<b>BUG RATING</b>		<b>B2 - U0 - G2</b>	
<b>FORWARD LIGHT</b>	<b>LUMENS</b>	<b>LUMENS %</b>	
LOW(0-30):	789.8	10.1%	
MEDIUM(30-60):	2,922.6	37.2%	
HIGH(60-80):	1,772.9	22.6%	
VERY HIGH(80-90):	55.4	0.7%	
<b>BACK LIGHT</b>			
LOW(0-30):	516.7	6.6%	
MEDIUM(30-60):	1,097.3	14%	
HIGH(60-80):	659.3	8.4%	
VERY HIGH(80-90):	37.2	0.5%	
<b>UPLIGHT</b>			
LOW(90-100):	0.000	0%	
HIGH(100-180):	0.000	0%	
<b>TRAPPED LIGHT:</b>	0.000	0%	

Table 7		Candela Table (Type C)																
CANDELA TABLE - TYPE C																		
	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	360	
0	1563	1563	1563	1563	1563	1563	1563	1563	1563	1563	1563	1563	1563	1563	1563	1563	1563	
5	1686	1676	1638	1603	1544	1505	1473	1449	1446	1464	1487	1523	1551	1611	1646	1675	1686	
10	1799	1780	1718	1642	1530	1447	1384	1335	1321	1352	1402	1465	1548	1651	1731	1783	1799	
15	1950	1914	1793	1673	1522	1401	1292	1211	1183	1230	1319	1414	1533	1677	1811	1904	1950	
20	2125	2068	1896	1708	1496	1347	1200	1078	1040	1095	1212	1346	1505	1701	1901	2062	2125	
25	2296	2231	2000	1740	1477	1282	1086	953	913	971	1098	1281	1486	1738	2010	2224	2296	
30	2462	2385	2133	1785	1460	1206	977	844	816	861	990	1227	1508	1811	2146	2384	2462	
35	2624	2564	2265	1843	1472	1144	882	762	745	786	905	1203	1568	1942	2312	2583	2624	
40	2736	2718	2444	1951	1536	1099	804	709	704	729	831	1199	1671	2149	2536	2760	2736	
45	2801	2830	2624	2111	1647	1092	752	669	668	689	776	1204	1827	2381	2760	2909	2801	
50	2768	2874	2799	2336	1814	1098	697	614	610	635	729	1229	2067	2683	2996	2975	2768	
55	2633	2849	2955	2590	2054	1105	627	534	523	553	654	1264	2352	3017	3191	2961	2633	
60	2196	2610	3043	2832	2310	1101	529	435	422	449	552	1267	2662	3311	3303	2755	2196	
65	1178	1828	3024	3072	2558	1057	405	328	323	341	421	1165	2889	3376	3258	2002	1178	
70	288	599	2435	3170	2554	917	277	235	242	248	296	916	2594	2854	2644	724	288	
75	191	205	1104	2453	1804	651	186	200	217	209	200	499	1493	1138	1121	201	191	
80	168	165	175	566	670	308	114	120	127	124	117	146	459	161	153	152	168	
85	82	98	85	116	137	65	46	34	18	34	48	31	109	71	78	90	82	
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	



Table 8		Equipment List		
Equipment Name	Equipment ID	Model	Manufacturer	Calibration due date
Spectroradiometer	ST-R-327	HAAS-2000	EVERFINE	2021-06-29
Standard lamp	ST-R-332	D204	EVERFINE	2021-06-27
Power meter	ST-R-333	PF2010A	EVERFINE	2021-06-29
DC power source	ST-R-335	WY305	EVERFINE	2021-06-29
AC power source	ST-R-349	DPS1010	EVERFINE	2021-06-29
Standard lamp	ST-R-343	D204C	EVERFINE	2021-06-27
Temperature sensor	ST-R-405	--	EVERFINE	2021-01-22
AC power source	ST-R-357	DPS1010	EVERFINE	2021-06-29
Power meter	ST-R-358	PF2010	EVERFINE	2021-06-29
Goniophotometer	ST-R-355	GO-R5000	EVERFINE	--
Standard lamp	ST-R-359	D908S	EVERFINE	2021-06-27
Temperature/humidity datalogger	ST-R-354	GRL-1-L	EVERFINE	2021-06-29



## Appendix: Product Photos

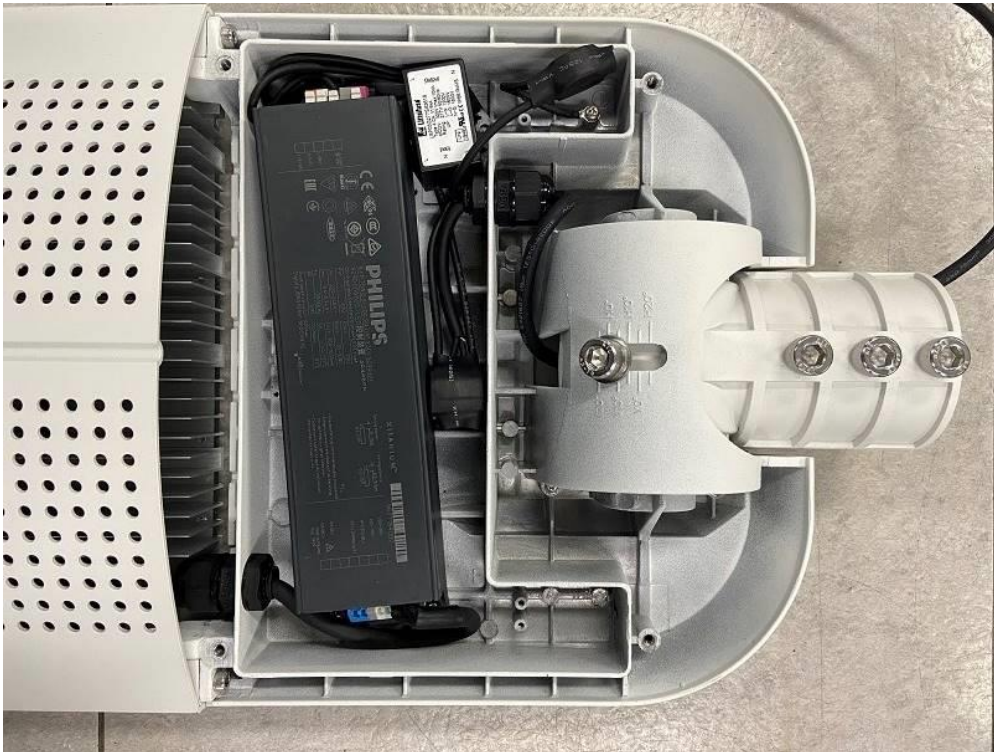
Picture 1: Over view



Picture 2: Back view



Picture 3: Internal view



Picture 4: LED driver view [[Model: Xi FP 75W 0.3-1.0A SNLDAE 230V S240 sXt]





Picture 5: LED module view



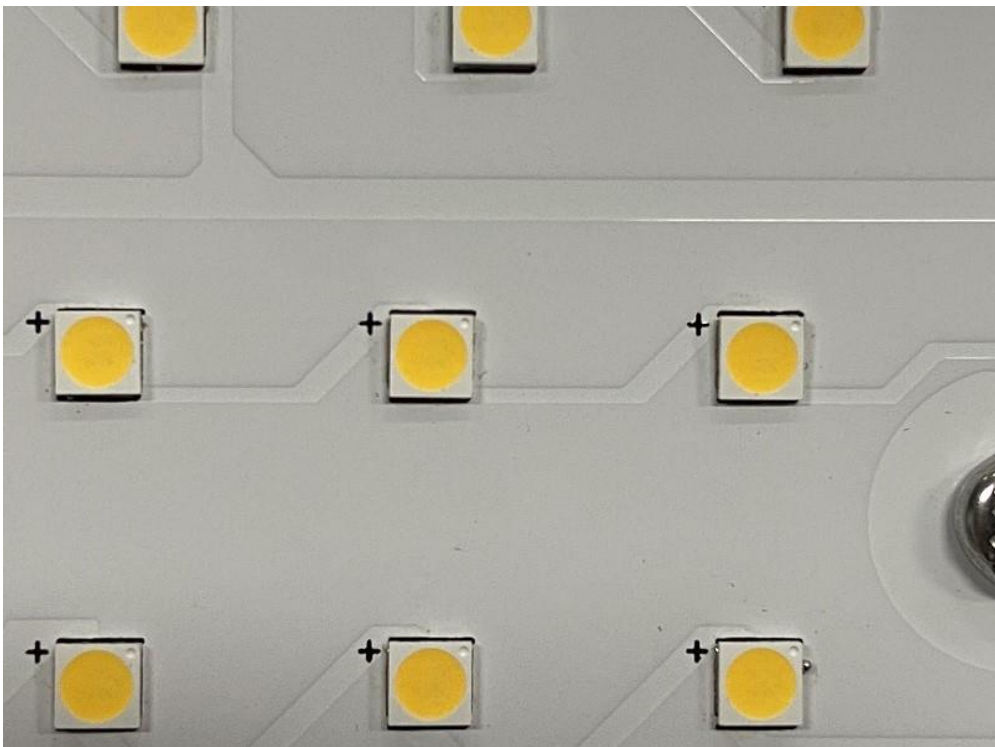
Picture 6: LED module view



Picture 7: LED lens view



Picture 8: LED view



---End of Report---